SPRUCE MOUNTAIN WIND, LLC
Site Location of Development Act//Natural Resources Protection Act
Spruce Mountain Wind Project

NOISE

- Maine Center for Disease Control review, email dated Sunday July 18, 2010

In an effort to save paper, please find the following information in the Board packet beginning at the page # listed below:

1676

Hallowell, Dawn

From: Mills, Dora A.
Sent: Sunday, July 18, 2010 11:56 AM
To: Hallowell, Dawn
Cc: Fisk, Andrew C; Cassida, James
Subject: RE: Spruce Mountain Wind

Sorry for the delay in responding! I'm doing an email marathon this weekend to catch up on a tremendous backlog.

I just read the paper below. I do not believe it sheds any new light on anything. My reading of the research is that yes, infrasound can stimulate cells in the ear, but that does not mean they are perceived or cause illness. I don't believe the author of this paper is stating anything that leads one to believe infrasound from wind turbines is causing health problems, syndromes or diseases.

Dora

From: Hallowell, Dawn
Sent: Tuesday, June 29, 2010 8:31 AM
To: Mills, Dora A.
Cc: Fisk, Andrew C; Cassida, James
Subject: Spruce Mountain Wind

Hello Dr. Mills,

A couple of weeks ago I sent you a request asking for comments from CDC regarding the Spruce Mountain Wind project. It's a 10 – 11 turbine project in Woodstock Maine. It will generate 18 to 20 Mega watts. The closest residence is ~2,100 feet away from the nearest closest turbine.

Please see the email below and the links to the articles submitted by the Friends of Spruce Mountain. In a separate email they sent this link...

http://oto2.wustl.edu/cochlea/windmill.html #1

Thank you for your help with this project,

Dawn Hallowell
Maine DEP
312 Canco Rd
Portland ME 04103
tel: (207) 822-6324 | fax: (207) 822-6303
email: Dawn.Hallowell@maine.gov

From: Friends of Spruce Mountain [mailto:friendsofsprucemountain@gmail.com]
Sent: Monday, June 14, 2010 6:27 PM
To: Hallowell, Dawn
Subject: Re: Waiver to allow project to exceed a decibel limit set in a town ordinance

Hi Dawn,

I am traveling over to Shagg Pond on Sunday and will get a list of addressees. We are excited that the DEP is willing to visit the area. As you know, Patriot wants to put up wind turbines in a populated area.

1677

The people here are concerned about the sound levels, since the people of Mars Hill and Freedom Maine have had so many problems. The sound maps that Patriot provided do not match up with recorded dBA sound levels that have been observed by people who live next to the turbines everyday. There are many new houses right below where the wind turbines will be placed and this is the area we would like the DEP to inspect. It is a comfort to know that a noise expert has been hired. Is this expert planning on visiting the area also? Otherwise, how can they judge how the noise will travel? Only one or two representatives of FOSM will accompany the DEP on the visit.

Many residents of Woodstock, Maine are dismayed that our elected officials would allow such an exponential increase in the local sound level ordinance. There is no need to repeat the mistakes made at Mars Hill and Freedom, Maine.

http://www.dixmontwind.org/home/beaver-ridge-llc-freedom-me #2

http://www.mpbn.net/Home/tabid/36/ctl/ViewItem/mid/3478/ItemId/8549/Default.aspx #3

http://www.wind-watch.org/documents/mars-hill-wind-turbine-project-health-effects-preliminary-symptoms-survey-results/ #4

Thanks for all your help with this project. You have been very responsive and informative. It is our belief that expectations are a two-way street and communications should flow both ways.

For FOSM,
Denise Hall

On Wed, Jun 9, 2010 at 2:22 PM, Hallowell, Dawn <Dawn.Hallowell@maine.gov> wrote:

1678 #1

If this is your first visit to this site, click here to go to our opening page about wind turbines first

Responses of the Ear to Infrasound and Wind Turbines

Cochlear Fluids Research Laboratory, Washington University in St. Louis

Alec Salt Ph.D., Revised August 30th, 2010

Overview

Our recently-published paper reviews well-established publications about low frequency hearing by leading scientists in the field of auditory physiology.

It concludes that **low frequency sounds that you cannot hear DO affect the inner ear.** The commonly held belief that **"if you can't hear it, it can't affect you" is incorrect.**

The paper shows how the outer hair cells of the cochlea are stimulated by very low frequency sounds at **up to 40 dB below the level that is heard.**

It shows that there are many possible ways that **low frequency sounds may influence the ear at levels that are totally unrelated to hearing sensitivity.**

As some structures of the ear respond to low frequency sound at levels below those that are heard, the practice of **A-weighting sound measurements grossly underestimates the possible influence of these sounds on the ear. Studies that focus on measurements in the "audio frequency range" (i.e. excluding infrasound) will not provide a valid representation of how wind turbine noise affects the ear.**

The high infrasound component of wind turbine noise may account for high annoyance ratings, sleep disturbance and reduced quality of life for those living near wind turbines.

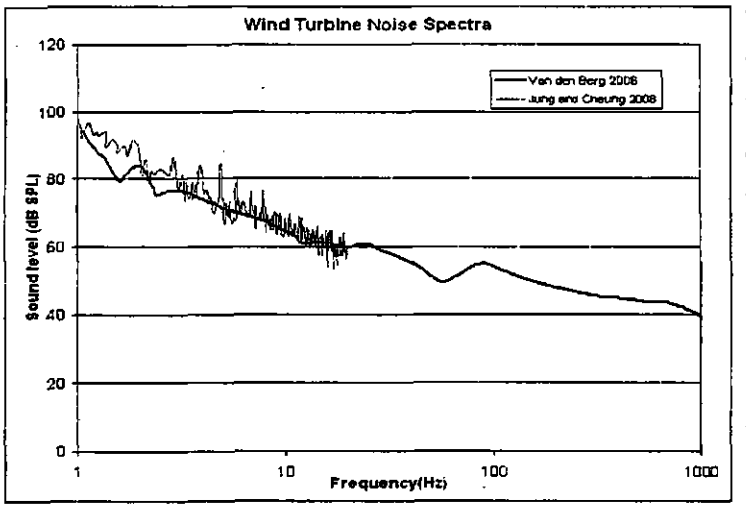
Introduction

Wind turbines are becoming increasingly important to our society, providing a "green" form of energy generation. As a result, the size and the numbers of wind turbines being built are rapidly increasing.

The noise generated by wind turbines has been reported to be substantially more annoying than most forr of transportation noise (airplanes, railways, roads, etc) (Pederson and Persson Wayne, 2004; Pederson an Persson Wayne, 2007; Pedersen et al, 2009). It has also been reported that some people with wind turbin located in the vicinity of their homes are upset by the noise and some have reported a variety of symptom that only occur within the vicinity of wind turbines (Pierpont 2009; Nissenbaum, 2010)

Wind Turbine Noise

1679



The noise generated by wind turbines is rathe dB SPL) of very low frequency sound (infrasc 2006; Jung and Cheung 2008).

There has been a widely held view that the wind turbines cannot influence the ear bec human hearing. Our study shows this view

But as a result, most measurements of wind tu according to the sensitivity of human hearing)

According to the British Wind Energy Associ the high infrasound component has been take dB SPL. They state that "Outside the nearest h and more often further, the sound of a wind tu about the same level as noise from a flowing stream about 50-100 metres away or the noise of leaves rust the sound level inside a typical living room with a gas fire switched on, or the reading room of a library c office."

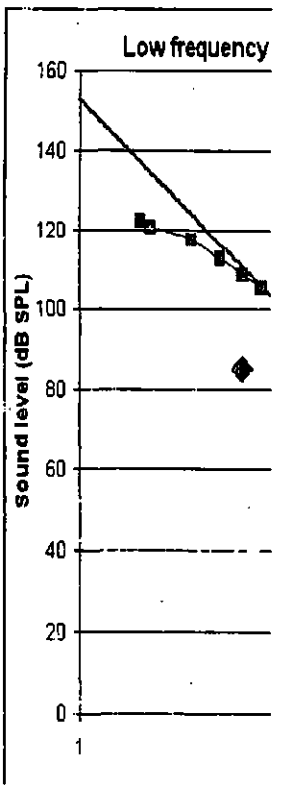
From this description, wind turbines would appear to be incredibly quiet.

So no one would expect emitted sound at this level to be a problem.

This characterization of wind turbine noise totally ignores the high infrasound component of the n measurements are perfectly valid if **hearing** the sound is the important factor. But, as sensory cells in the below those that are heard, A-weighted measurements do not adequately reflect the true effect of the sou

Research by Our Group

The research performed in our laboratory covers a number of areas related to inner ear function and the physiology of the cochlear fluids (apparent from the rest of the Cochlear Fluids website). Our group has for years been using infrasonic tones to study how the ear works. These are often described as "biasing tones", because they allow the structures of the ear to be displaced slowly while measurements are made. For almost 10 years we have been using infrasonic 5 Hz bias tones at levels as low as 85 dB SPL (shown as the green diamond in the graph at the right) to manipulate cochlear responses in guinea pigs. The guinea pig is LESS sensitive to low frequencies than the human, so this makes you realize that low frequency infrasonic sounds ARE AFFECTING THE FUNCTION OF THE EAR at levels well below those that are heard by humans. (shown as blue symbols in the graph). Also shown for comparison (red line) is the calculated sensitivity of the inner hair cells (IHC) of the cochlea – the cells that you hear with.



So, the question remains, how can infrasonic bias tones affect cochlear responses at levels well below those that should be heard by the guinea pig.

The answer is complex and requires an understanding of the physiology of the ear and how it responds to low frequency stimuli. It is the subject of our paper titled:

1660

Responses of the Ear to Low Fre
Infrasound and Wind Tu

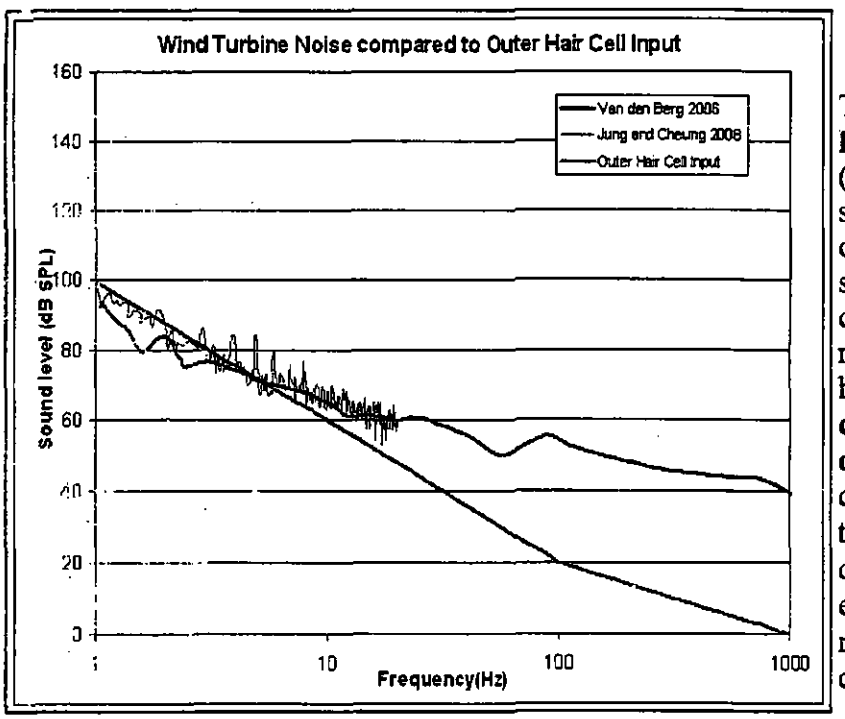
Alec N. Salt and Timothy E. Hull

Now available from the Elsevier journal: Hear

(This paper has been peer-reviewe

Some of the points made by our paper include:

1. The outer hair cells of the cochlea are stimulated by low frequency sounds at levels much LOWER the OHC are **stimulated in some people by infrasounds at the levels generated by wind turbin** wind turbine noise may be the cause of the increased annoyance of some individuals to wind turbir if there are health effects in some individuals, then the infrasound component of wind turbine noise
2. **Stimulation of the OHC occurs at infrasound levels substantially below the levels that are he** OHC occurs at approximately **30-40 dB below sensation level** depending on frequency. **The conc can have no influence on the inner ear is incorrect. Infrasounds that cannot be heard DO infl**
3. The practice of **A-weighting measurements of wind turbine noise underestimates the influence**
4. Some clinical conditions (endolymphatic hydrops and "third window" pathologies, such as superio **hypersensitive to infrasound stimulation**. In both hydrops and SCC dehiscence it is possible to h This leads to the possibility that some "apparently normal" (asymptomatic) individuals may be hyp
5. In order to more fully understand why infrasound affects the ear at levels that are not heard, you w



The Outer Hair Cells

The estimated outer hair cell sensitivity **line** in the figure at the left, and compa (shown as **the blue line** and **the red lir** sensitive to infrasound than previously cells are known to be mechanically mo stimulate them). They are the mechanic contribute to making your hearing as se miniature "muscles" that amplify vibra hear. However, another function of the **counteract very low frequency, infra don't** hear them. This would represent cancellation. So, these cells are not inse transduce the signal and then actively c don't hear it. So a high infrasonic comp expected to give the outer hair cells "a necessarily be aware of what they were cancel out the sound so you don't hear

dislike / disturbance of individuals by wind turbine noise may be related to the long-term stimulation of t

It cannot yet be concluded that this type of stimulation causes specific symptoms in people. More researc does, however, suggest that the infrasound component of wind turbine noise should be studied further as rather than being dismissed as an impossible cause. There is a need to collect more direct evidence from reduce the infrasound sensitivity of the ear in humans by placing a tympanostomy tube in the eardrum. T perforation so that sound pressure is shunted across the eardum. Because infrasound changes pressure rat eardrum more easily than high frequency sound, so the low frequencies will no longer stimulate the ear a symptoms of patients who were sensitive to wind turbine noise were alleviated by placement of tympano case that the infrasound component of the noise was the source of the problem.

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Nissenbaum 2010 The Society for Wind Vigilance

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#2

Dixmont Wind

Search this site

Dixmont, Maine 04932

Industrial Wind Basics

What Was Proposed for Dixmont?

What Will It Look Like?

Frequently Asked Questions

Why Do We Need a 1-Mile Setback?

Dixmont Residents Speak

Freedom, Maine: Life Next Door to an Industrial Wind Facility

Mars Hill, Maine: Voices and Images

Vinalhaven: Lessons Learned

Dixmont's Comprehensive Plan

Town of Jackson

Town of Montville

Links to Additional Info

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Freedom, Maine: Life Next Door to an Industrial Wind Facility

Read the letter submitted by residents of Freedom to the town of Dixmont, which is a response to the recent Q&A session sponsored by Dixmont's Select Board. Two of the panel members at that session were Ron Price, Freedom First Selectman and property owner/lease signer for the Beaver Ridge Wind facility, and his nephew Andrew Price, one of the principles for both Beaver Ridge Wind LLC and Mt. Harris Wind LLC, the limited liability corporation that is proposing a similar facility for Dixmont.

The signers of this letter all live within a mile of the Beaver Ridge facility. **Read the letter here.**

Comments to the Wind Power Task Force

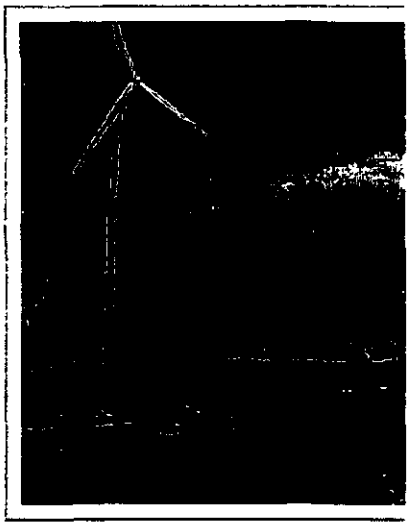
By Steve Bennett - July, 2007

I am writing these comments as a citizen of the Town of Freedom, as an abutter and as an opponent to the proposed wind turbine project in Freedom. I am a retired teacher, a business owner, former chair of the town Planning Board and the Board of Selectmen. As I read the objectives that have been set forth for this committee; comparing Maine's policies with approaches used in other jurisdictions, development of policies and a regulatory framework for evaluating wind power projects, creating guidelines to help developers identify areas appropriate for wind power

1683

Contact Us

The turbine here is approx 2,900 feet from this Freedom home - well over 1/2 a mile.



A turbine in Freedom dwarfs the landscape.

Read Phil Bloomstein's **Personal Account** of life 1,000 feet from a wind turbine:

Living next to a wind turbine

July 1, 2009

development and avoiding areas that are not appropriate for development, I applaud Governor Baldacci for the position he has taken and for creating this task force. The State of Maine should recognize and take advantage of its potential for development of wind power, but it should also recognize the harm that can be caused if these projects are poorly sited. I realize the difficulty this task force faces in trying to develop guidelines that will appeal to a majority. In our rush to bring development and business to Maine and to create renewable energy resources however, let us not forget the reasons we reside in Maine in the first place.

The recent repeal of Freedom's Commercial Site Review Ordinance, the subsequent approval last week of a $12,000,000 wind turbine project by the issuance of a simple building permit stipulated by the town's building ordinance, and the convoluted series of events that led the town to this point

We have the distinct "privilege" of living 1,000 feet from tower T3 of the Beaver Ridge Wind Project. Freedom residents on both sides of Beaver Ridge live almost as close but none as close as my family and me. We have tower T3 literally staring us right in the face winter and summer.

In the summer the tower and blades almost disappear when you are by the house, but the tower and blades still hang above the house as you walk in our lower gardens. And, you can view the wind turbine from many other spots on our land. As disturbing as the visual presence of a nearly 400-foot wind turbine is, and its occasional hours of turbine-blade flicker, all that pales in comparison to the noise the turbines often produce. I would dare say we live in one of the noisiest neighborhoods in Waldo County.

Let's get one thing straight. I'm not claiming my life has been ruined. I'm not looking for sympathy. I'm sure many of you have suffered personal tragedies much worse than having a wind turbine built next to you. What I am asking for is the truth and some justice.

I want to present you with a credible picture of the provides an interesting case study for this task force as it develops statewide guidelines for wind power development. I urge this committee to look at this example. On March 1, 2006, Richard Silkman of Competitive Energy Services (CES) presented a plan for three 1.5 MW wind turbines on Beaver Ridge in Freedom. The town did not have a Comprehensive Plan to guide any development or land-use activity, only a smattering of specific ordinances addressing different issues. Thus, all that was required of CES was a simple building permit.

CES understood at the time of this initial application, that to ensure broad support of the project, the town and CES would best be served if the town could develop an ordinance under which the project could be reviewed more thoroughly and that would address town, abutter, land-use and other impacts of this or any other proposed commercial development in Freedom. CES therefore withdrew its initial application

1685

turbine's effects on the quality of our family's home life. I also want you to understand that the town of Freedom's planning and permitting of the Beaver Ridge Wind Project was extremely flawed. It was marked by deceptions, poor planning, and small-town politics at its worst. In my opinion, the project has proven that many good folks in the town of Freedom were outwitted by CES now Beaver Ridge Wind. Many community members were so pro green they were susceptible to the developer's deceptive practices and failed to be responsible to us and our neighbors.

Read Phil's full account **here.**

View the Freedom YouTube Videos -

View videos by Phil Bloomstein showing shadow flicker at his home and comparing the noise from the turbine 1,000 ft from his house to that made by his refrigerator.

The following letter was written by a Freedom resident who lives roughly 0.6 miles from the Beaver Ridge

allowing the town some time to develop such an ordinance.

The ordinance that was developed by the Planning Board over the next four months of tiresome, contentious and difficult meetings resulted in the passage of a less-than-perfect ordinance. To the abutters it seemed that the ordinance was being crafted to accommodate the wind project.

Nonetheless, support at town meeting for the ordinance was nearly unanimous, and everyone agreed it was sufficient to protect the town and clear enough to guide developers. Many people also assumed the ordinance would result in an approval of the wind project by the Planning Board.

CES then put forth its application. Each turbine would have a tower 262 feet tall and 130 foot blades. The overall height of each turbine would be just under 400 feet. Setbacks from abutter's lines, given the size and shape of the property, would be approximately 350 feet, as measured from

1686

Facility:

My family and I live on the Deer Hill Road in Freedom, roughly 0.6 miles from Beaver Ridge where the 3 turbines have been erected. Actually, Phil and Debbie Bloomstein (check out their shadow flicker video on You Tube) are neighbors. In 1999 part of our decision to purchase the 16+ acres off the Deer Hill Road was largely based upon its peacefulness and seclusion. Thus, my concern when I heard that wind turbines were being erected on Beaver Ridge within walking distance from my home. I wasn't sure what they were and didn't know anything about them so took it upon myself to do a little research. Holy cow, you wouldn't believe the amount of information, both pro and con, available out there. It took me weeks to get a general idea of what they were all about. This was, however, long enough for me to decide I didn't want them anywhere near my home or my family.

I won't go into the details about the town's activities in regards to these turbines or the gossip and accusations that were flung around. In essence, we were (and still are) a town divided. My family, too, was divided. I was completely opposed to the turbines the center of each turbine. Eleven different abutters would be as close 350 feet from at least one of the three turbines. Nevertheless, since the ordinance defined acceptable setbacks in terms of multiples of the height of the turbine from occupied structures, or four times 262 feet, the height of the tower, setbacks from the nearest occupied structure would have to be at least 1048 feet, and since the nearest home was approximately 1050 feet, the application met the terms of the ordinance. In total, there are eight homes less than 2000 feet from one or more of the turbines, and another seven homes within 3000 feet. There are at least another six property owners that have purchased land over the years to either build homes for themselves or to be able to give land to their children so they could one day build homes. All distances were approximate as no current survey was provided by CES or required by the Planning Board. The only survey of the property was done in

coming to Beaver Ridge. My thoughts were that they were too dangerous and disruptive to be placed close to residential properties – my own included. My husband, on the other hand, was neutral. He took no side in the ensuing battle, attended only one meeting and, if asked, his response was, "They can't be that bad or people wouldn't be putting them up." Or my personal favorite, "It's his property let him do what he wants." Nearing the time of assembly of the turbines my husband didn't even want to discuss the subject with me. He'd pretty much had heard enough and it became sort of a taboo subject in our household.

So . . . imagine my perverted glee when about a week after the turbines became operational, I got up one morning to find my husband sitting on the couch in one of the foulest moods I'd seen him in for a long time. My husband is a very sound sleeper and once asleep is extremely hard to wake up. (This is a man who can sleep through a booming thunderstorm and who slept through the big earthquake we had back in the late 90s.) It appears that wind turbines can wake him up and keep him up. I listened to him rant and rave for hours before I finally left for work. I do

1980 and outparcels have been made since. Hand-held GPS readings taken by CES were relied upon to define all distances and setbacks.

The project would also require approximately 1000 feet of discontinued/abandoned town road to be rebuilt and widened, as well as another 4000 feet of new road across hay fields. All access roads when done would be 20 feet wide. As stated publicly and in writing by CES, land would have to be taken through eminent domain from landowners in order to widen a corner and allow for the turbines to get onto the access road leading to the project site. In spite of the large amount of new impervious surface area created by the widening of 1000 feet of old road, the construction of 4000 feet of new road, and the necessity for hardened staging areas of at least an acre around each turbine as evidenced at Mars Hill, CES has consistently maintained that the new impervious surface area created by this project would add up to only 5/100th of one

1684

want to point out I was a good wife and bit my tongue – not once did I utter aloud "Told you so." My husband still has nights when he'll get up because the noise has awoken him and he can't get back to sleep.

Our home is nestled in a little clearing completely surrounded by forest, but from our front yard we can see one of the turbine's blades turning through the trees – even during full foliage. The noise is unbearable on windy days, sounding much like an airplane engine accompanied by the rhythmic whoosh of the rotating blades. On a mild day, it's very annoying to constantly be looking for the plane that never passes overhead and especially irritating because the noise doesn't fade away but is a consistent background drone. I will admit that, at first, it was slightly amusing to watch our friends continuously looking up at the sky trying to find aforementioned elusive plane after the turbines went up. To this day, visiting friends will comment on the noise and we'll nostalgically talk about how peaceful it used to be. My husband and I, at least, are now united in our negative feelings towards the Beaver Ridge turbines. I know of 3 families that

acre; therefore a storm water management plan would not be needed.

The Planning Board agreed. In my opinion, this project would create new impervious surface area closer to five acres than it would 5/100 of one acre.

The Planning Board did want to know from CES if the DEP would need to review or permit this project. CES's reply as stated in their first application and again in the newly approved application, is "the Beaver Ridge Wind Project does not require any approvals from any agency in the State of Maine." At the initial meeting March 1, 2006, I asked if a three turbine project was economically feasible. The reply from Richard Silkman of CES was that the footprint of the project was so small, it would not come under state regulatory (DEP) guidelines and CES would not be required to spend a lot of money doing impact studies. Clearly what CES would like to avoid is the costs associated with the state's Storm Water Management Law and the Site Location of

1689

have the same views as my husband and I, but I'll let them tell their own stories.

There have been numerous nights that the noise produced by the turbines can be heard over the sound of our television (with the volume turned up to 34 – which in itself is disruptive). The whooshing of the rotating blades, while you might think would be soothing is, in fact, nerve racking. One night, as I was drifting off to sleep, I realized my heartbeat had slowed down to beat in sync with the whoosh produced by the rotating blades. I have to admit I panicked. The feeling was so unnatural and weird that it scared me. It took me hours to fall asleep afterwards. I kept waiting for it to happen again.

I would also like to mention that Bob Garrish, another neighbor, has put up a big hand painted sign at the end of our road that says "No Access to Windmills" as he's been blocked out of his driveway several times by parked cars belonging to visitors to the turbines. And yes, he did make a public complaint that resulted in the town erecting a very small sign warning violators that parking and turning around on the road would result in prosecution, or some such thing. Neither sign has been an effective

Development Law. I understand the need for any business to try to keep their costs within reason, but not by avoiding our environmental laws.

The ordinance, however, did require a sound study and did require a decommissioning bond in case the turbines had to be dismantled. A sound modeling study was done by a consultant hired by CES in order to show that sound levels would not exceed 45 dbl at the nearest home and 55 dbl at property lines. The individual doing the sound study reported that these limits could be met assuming ambient noise of no more than 30 dbl. He never actually visited the site, and no ambient noise was ever measured. The Planning Board waived the decommissioning bond and in spite of these and other issues raised by the abutters, approved the project.

Once the permit was granted, a long list of abutters and concerned citizens appealed the decision. Much of the debate centered on the sound study conducted

1690

deterrent.

Don't get me wrong, I'm all for "green" power and even understand the necessity for it, but at what point does it become less of an asset and more of a liability? At what point does the money that may be obtained and/or saved more important than the health and goodwill of your friends, your loved ones and your community? Are there other less disruptive resources available that might aid a town in becoming more economically secure? I do know that Freedom has an existing pond and a dam. Would this have been a less controversial and more beneficial endeavor in producing a form of "green" power for Freedom? Who knows . . .

The one thing that shocked and baffled me the most about this whole Beaver Ridge business was the voting out of Freedom's town ordinance. I apologize if I am wrong, but my understanding of the purpose of any town's ordinance is for the protection of THE town and ALL it's residents. Obviously Freedom is selective in this regard and unmindful or uncaring of the consequences this type of action could produce.

In the past I've helped the

by the consultant hired by CES, and whether the ambient noise levels assumed by the consultant were realistic. In spite of repeated requests by the Appeals Board for further documentation from CES that it would be able to meet the standards set forth in the ordinance, no further information was provided to address these concerns.

The appeal was upheld by the Appeals Board primarily over the issues of noise (The Appeals Board determined CES did not sufficiently demonstrate that it could and would stay within the sound limits in the ordinance), and the waiver of the requirement to post a decommissioning bond.

Instead of complying with the terms of the ordinance and reapplying, CES chose instead to support and encourage a repeal of the same ordinance that they supported passage of the year before. In a letter to residents, CES characterized the repeal of the town's Commercial Site Review Ordinance as a vote for wind power.

1691

Freedom Recreation Committee by volunteering my time at Freedom Field Day – which my family did not attend this year. My husband accepted the position of Acting Road Commissioner briefly when the elected Commissioner resigned. He has, in fact, been asked numerous times to run for the position. Unfortunately, those days are behind us. We are Freedom residents, but we are not members of the community. My husband and I have no respect nor desire to help a town that will not offer any in return.

Barbara Littlefield
Freedom Resident
November 13, 2009

CES further stated that they would slow blade rotation, if necessary, to reduce sound output; second, it would appoint a community liaison to hear complaints and communicate them to CES; and third, would establish a 24-hour phone number for calling in complaints. While these pledges gave the appearance of good will toward the concerns of the abutters and neighbors, they did not solve the main problems. Instead, these assurances were used to bolster the case to repeal the ordinance.

One has to wonder why CES didn't offer these assurances in the context of the appeal process. Its failure to do so led the town to a contentious and fractious vote that framed the recent debate as a vote for or against the turbines, using the ordinance as proxy for that vote, rather than working within a process that could allow for fair treatment of all parties—the company, the landowner, the abutters and all townspeople with an interest in the project.

1692

One of the wind turbine supporters wrote a letter to the residents claiming that the three turbines would pay $200,000 per year in taxes, almost half of all taxes collected by the town. The idea of a significant reduction in property taxes and other stories spread around town spelled doom for the ordinance, and the town voted 59% to 41% in favor of repeal. CES will not need to worry about violating sound ordinances or any other nuisance rules in Freedom; we don't have any more rules.

The debate in Freedom this past year was and still is about process, and whether a small town is able and prepared to gather the information necessary to make an informed decision about an issue as complex as this, and whether they are able to understand the need to treat all landowners fairly, and the importance of having planning tools like ordinances to facilitate a fair process.

Now that the CEO has issued a new permit and the Planning Board

1693

has given its stamp of approval for a second time, the abutters are left to wonder if anyone really cares about our welfare. We trust that the state's environmental laws will be enforced, CES's denial of DEP review not withstanding. But what about the other issues associated with turbines of this size being located so close to people's homes and property? What is so different about all of this is the turbines themselves. Does it require ten turbines to disrupt people's lives, thirty, or only one? Are setbacks to be measured in such simple terms as multiples of turbine height? Does it matter if someone is upwind or downwind from a turbine? Do we really know the health impacts associated with living too close to turbines? Are the impacts upon wildlife and adjoining property values to be addressed? Will the issues of noise, health, ice throw, blade flicker, and fire safety be examined by this task force as well?

We hope so, and we hope that this task force will consider the

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ongoing experience of the Town of Freedom as it works to develop guidelines for the state so that other towns will not be faced with the approach utilized by the developer that chose to come to Freedom.

Sincerely,
Steve Bennett

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Discontent Of Mars Hill Residents Leads To Lawsuit Against First Wind

August 7, 2009 Reported By: Anne Mostue

A group of Mars Hill residents who live near the second largest wind power project in the state have filed a lawsuit against the developer, First Wind, citing noise and health concerns and seeking compensation for a loss of property value.

Related Media	
MTC Story Originally Aired: 8/7/2009 5:30 PM	Listen *Duration: 5:10*

Wendy and Perrin Todd began building their dream house on family land on the east side of Mars Hill back in 2005. Talk of a wind farm development going up just behind their house was already in the air, but Wendy Todd says she and her husband were supportive of the project. "We thought it was fascinating. We thought, 'Wow, what a good idea!' We really did. We thought, the renewable energy, the job creation. I think we bought into the whole they're part of the answer to saving the planet."

But when the clearing and blasting began, soon followed by the erection of 28 turbines, each measuring nearly 400 feet tall, Todd says she began to wonder if she and her neighbors had been misled. "The visual devastation has just been really hard. When the turbines were first talked about I don't think any of us understood how large they were because there's nothing in Aroostook County that even comes close to relating to their size. And the mockups that were done at town meetings were all from three miles or better away. So it didn't give you the perspective of what it was going to be like to live beside them. It gave you a perspective of what they would look like as you were entering Mars Hill and different views from around Mars Hill."

Soon Todd says the intermittent sounds and shadow flicker from the turbines began to wear on her nerves. State regulations say the turbines are not to exceed 50 decibles at the project's property line, but Todd says sometimes the so-called "blade thump" is loud enough to be heard over her dishwasher and three children playing. At the time of this reporter's visit, the turbines were barely moving and could not be heard in or outside of her home. But Todd says turbines are loudest in the winter months.

"Turbine noise sounds like a jet, but it fills the air," Todd explains. "Now if you have anywhere from 24 hours to 3 to 5 days of bad turbine noise, symptoms start to

appear. So with sleeplessness and edginess - because it wears on you and gets under your skin and it drives you crazy - so you start to get short with people and angry with people. Stress in the house is the best way to describe it for us."

The Todd Residence in Mars Hill. *Photo by Anne Ravana.*

Todd and 16 of her neighbors have recently filed a civil suit in Superior Court in Caribou against First Wind, two construction firms and the Town of Mars Hill. They allege that they were not properly notified of the construction, blasting, operation and planning of the wind turbines and they want compsensation for what they say is a resulting drop in their property values along with emotional and physical distress.

First Wind Spokesman John Lamontagne says he cannot comment on the suit, but says his company is proud of the development and the clean energy it generates. "It's currently delivering power to about 20,000 homes in New England. It's clean, renewable power. Second, this project in particular delivers half a million dollars to the town of Mars Hill every year. That's a pretty significant chunk of change to a town like Mars Hill and taxpayers have seen their tax bills drop because of this project."

Lamontagne says all First Wind's projects involve a lengthy review process with the Maine Department of Environmental Protection and regular meetings with townspeople. "We strive to be a good partner in the communities where we locate. And we have many supporters in Mars Hill. I think there are a lot of folks who are happy with the project and happy with the work that we've done there. We've met several times with neighbors to hear their concerns and work with them. And again, we're proud of the project and we feel that a lot of folks in Mars Hill are very happy with it."

The Mars Hill Town Manager declined to comment on this story.

Most of the plaintiffs live within a half mile of the turbines and while most have filed a single suit as a group, three have filed individual suits. In addition to noise complaints, Wendy Todd says many of her neighbors suffer from insomnia, depression and headaches related to the presence of the wind turbines. She says she'd consider moving, but she says her property value has dropped by 30 percent and she doesn't think anyone would want to buy her house.

"Would we move? Yeah, I guess we'd move but we've lived here all our whole life. Where would we go? How would we start over? And most people at this point are trapped in their homes. I mean, you know you hear stories of other families who have abandoned their homes. I can understand that. And most people roll their eyes. No, it's real. It's true. I can understand why they feel they have no other choice but to pack their bags and abandon their homes."

It's an emotional subject for Todd, but she says she's not opposed to wind projects in general. She just wants the state to set stricter rules with regard to the siting of wind farms, miles from any home.

Return!

1698 #4

National Wind Watch

March 31, 2009

Health, Human rights, Maine, Noise, Property values, Regulations

Mars Hill Wind Turbine Project Health Effects — Preliminary Symptoms Survey Results

Nissenbaum, Michael

Presentation to Maine Medical Association, March 20, 2009

There are 28 389-ft-tall 1.5-MW GE turbines on Mars Hill in Aroostook County, Maine, with 20 homes within 3,400 feet (just over 1 kilometer) north and east of them, representing 35 adults and 16 children. Dr. Nissenbaum, a radiologist at Northern Maine Medical Center, interviewed 15 of the adults, from 9 homes 1,200-3,400 feet (average 2,500 ft) from the nearest turbine. The subjects comprised 7 women ranging in age from 41 to 73 years and 8 men aged 47-75 years; the average ages were 59 and 61 years, respectively.

Since the wind turbines began turning in December 2006, 93% of those interviewed experience sleep disturbance, 60% 5-7 times per week, 87% to a degree that they have consulted a doctor. 53% have increased headaches, 40% newly onset. 20% experience dizziness, and 20% unusual body sensations (2 subjects reported chest pulsations, 1 pulsatile ear pressure). 33% are troubled by shadow flicker: 2 subjects experience nausea and dizziness, 2 dizziness only, and 1 migraines. 33% have gained weight, and 1 subject has lost weight.

73% have feelings of stress, 87% anger, 40% anxiety, 27% irritability, 73% hopelessness, and 53% depression (7 out of 8 new, and 1 subject increased). The anger can be extreme, as evidenced in comments such as: "Absolute rage — you feel you want to kill someone" (67-year-old woman) and "So angry I could kill" (65-year-old man). Hopelessness is also deep: "Nobody will help us"; "No options — can't leave, and can't live here"; "People don't believe us"; "No one cares. No one listens"; "It's very hard watching my child suffer". Two women and 2 men (27%) were tearful at points during their interviews.

20% received new prescriptions for depression, and 1 subject's existing depression medication was increased. 20% were newly diagnosed with hypertension, and 1 subject's blood pressure worsened; all were offered new or increased medication, and 3 of the 4 subjects accepted.

100% agreed that their quality of life has been affected, with comments such as: "Loss of joy in living ... put a lot of life's plans on hold"; "No desire to go outside"; "Feel trapped"; "Dreams have been dashed"; "We have no peace and quiet"; "My husband's [who has advanced MS] only pleasure in life was to see the wild animals. They are gone"; "No sleep": "Sinking feeling every night when I [come home] and see them".

100% have considered moving away, and 73% can't afford to. For 90% of the homes (8 oout of 9), loss of home value by recent appraisal makes it impossible to move away.

Dr. Nissenbaum emphasizes that this is a preliminary report, the sample size is small, and the data are

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retrospective. There is no control group, and statistical analysis has not yet been performed. Nonetheless, the trends are alarming.

Download original document: "Mars Hill Wind Turbine Project Health Effects — Preliminary Symptoms Survey Results" [1]

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